What is claimed is:

1. A signal processing apparatus, comprising:

a feedback signal reception unit receiving status information of at least one channel;

a data block segmentation unit receiving one of the first data blocks to segment into at least one or more of the second data blocks;

a CRC attachment unit attaching a CRC to each of the at least one or more of the second data blocks;

a data block allocation unit allocating the at least one or more of the second data blocks according to an antenna via which the at least one or more of the second data blocks will be transmitted; and

at least one or more antennas to transmit the at least one or more of the second data blocks.

2. The signal processing apparatus of claim 1, wherein the feedback signal reception unit estimates a channel status using the feedback signal.

3. The signal processing apparatus of claim 1, further comprising an antenna selection unit determining that the at

least one of the second data blocks is transmitted via which one of the at least one or more antennas.

4. The signal processing apparatus of claim 3, wherein the antenna selection unit determines the antenna via which the at least one second block will be transmitted according to the status information received by the feedback signal reception unit.

5. The signal processing apparatus of claim 1, wherein the CRC is differently attached to each of the at least one or more of the second data blocks.

6. A signal processing apparatus having a plurality of receiving antennas, comprising:

at least one receiving antenna unit receiving data block;

a channel estimation unit processing the received data blocks to acquire channel status information; and

a feedback signal transmission unit transmitting the channel status information.

7. In a mobile communication system having a plurality of transmitting antennas, a signal processing method comprising the steps of:

receiving a feedback signal including status information of at least one channel;

segmenting one of the first data blocks to segment into at least one or more of the second data blocks;

attaching a CRC to each of the at least one or more of the second data blocks;

allocating the at least one or more of the second data blocks to a plurality of the transmitting antennas, respectively; and

transmitting the at least one or more of the second data blocks.

8. The signal processing method of claim 7, further comprising the step of estimating a channel status using the feedback signal.

9. The signal processing method of claim 7, further comprising the step of selecting the transmitting antennas via which the at least one or more of the second data blocks will be transmitted.

10. The signal processing method of claim 9, wherein the transmitting antennas are partially selected.

11. The signal processing method of claim 10, wherein the CRC or dummy bits are transmitted via the transmitting antennas that are not selected.

12. The signal processing method of claim 9, wherein the transmitting antennas via which the second data blocks will be transmitted are selected according to the received channel status information.

13. The signal processing apparatus of claim 7, wherein the CRC is differently attached to each of the at least one or more of the second data blocks.

14. In a mobile communication system having a plurality of receiving antennas, a signal processing method comprising the steps of:

receiving at least one data block including a CRC or dummy bits;

acquiring channel status information using the CRC or dummy bits; and

transmitting the channel status information.